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Project Name: Morgan Energy Center-Delphi (AL) 161-kV Transmission Line
Project Number: 2002-136

FINDING OF NO SIGNIFICANT IMPACT

CALPINE MORGAN ENERGY CENTER – PROVIDE INTERCONNECTION

The Proposed Action
The Tennessee Valley Authority (TVA) proposes to interconnect Calpine's new Morgan Energy Center generating plant to TVA's transmission system at General Motors (GM) Substation. TVA would construct 12.0 miles of new 161-kV transmission line on existing right-of-way and 3.8 miles on new right-of-way 100 feet in width in northern Morgan and southern Limestone Counties, Alabama. The proposed transmission line would be built using the vacant side of existing towers on 6 miles of existing right-of-way and H-frame steel structures on the remaining right-of-way. The new section of right-of-way would occupy about 41 acres. On the existing right-of-way, approximately 11.5 acres which has not been previously maintained would require clearing. TVA would replace breakers and communication equipment at the GM Substation and install a carrier set and wave trap at the Morgan Energy Center.

Background
The purpose of the proposed action is to comply with provisions of the Federal Power Act by providing an interconnection to the TVA transmission line system as requested by Calpine for its Morgan Energy Center.

Alternatives
While planning this project, TVA considered various means of providing an interconnection to Calpine's Morgan Energy Center. The proposed action (the preferred alternative) is the alternative that would require less scheduled outages and the least amount of new transmission line and right-of-way. Because of requirements mandated by the Federal Power Act, TVA does not have the discretion to take no action in this situation and the No Action Alternative was deemed unreasonable.

During the development of the proposed action, TVA considered two alternative routes for the proposed transmission line. Both routes would run south out of Calpine's Morgan Energy Center, head west along the railroad right-of-way and turn north parallel to TVA's existing transmission lines on existing right-of-way. The parallel route continues north crossing the Tennessee River, and then heading east approximately six miles. At this point two separate routes were identified to head south on new right-of-way and connect to the GM Substation. The preferred route was selected based on a number of factors including public input, attempts to minimize environmental impacts and severance of property, and avoid other cultural features. This preferred route is analyzed in detail in the Environmental Assessment (EA).

Impact Assessment
The EA concludes that the impacts to terrestrial plant and animal communities would be minor and insignificant. No uncommon plant or animal communities occur in the project area. Of the approximately 41 acres of new transmission line right-of-way approximately

12 acres are forested and would be converted to non-forested habitats. An additional 11.5 acres would be cleared within existing right-of-way. The forest in this area is already heavily fragmented and the impacts of the resulting forest loss and increased forest fragmentation would be small. No federally listed endangered or threatened plants or animals are known to occur or are likely to occur within the project area, and consequently no impacts to these species are anticipated. One terrestrial animal and one aquatic animal, both state-listed, have been reported from the project area and potential habitat was identified along the proposed line. These species could be affected; however, habitat for these species is fairly common in the project area. No significant impacts on any animals of conservation concern in Alabama are anticipated.

The proposed transmission line would cross 16 separate wetland areas with a total area of about 16.5 acres. About 6.5 acres of the wetlands are forested and the remainder is emergent or scrub-shrub wetlands or a mixture thereof. Two of these sixteen wetlands occur within the new proposed right-of-way and occupy about 4.6 acres. Ten steel pole structures would be directly imbedded in bored holes in these wetlands. The holes would be backfilled with the excavated material with the top 6 to 12 inches backfilled with excavated topsoil from the bored holes. Impacts to wetlands would be minimized through the use of Best Management Practices, and overall wetland impacts would be insignificant.

The proposed transmission line is in the watershed of the Tennessee River. The transmission line would cross perennial streams twelve times, cross one pond, one intermittent stream, and numerous wet weather conveyances. No unusual aquatic communities are known from these watercourses. Round Island Creek is on the state 303(d) list as partially supporting its designated uses due to siltation from agriculture. The Tennessee River (Wheeler Reservoir) from the Elk River to Wheeler Dam is on the year 2000 303(d) list due to thermal modification, but is not included on the proposed year 2002 list. Best Management Practices and other streamside protection measures would be used to minimize the impacts of transmission line construction and operation on area streams. With the implementation of these measures, impacts to streams, aquatic life, and water quality are expected to be insignificant.

Portions of the transmission line would be located in identified floodplains. Construction in these areas would not result in any increase in flood hazard, and the proposed action is consistent with the Executive Order on Floodplains. The transmission line crossing at the Tennessee River would use existing structures and would meet the minimum requirements for vertical clearances on main stream navigable waters. The project is compatible with current land uses, and the proposed action would not negatively affect prime farmland. Impacts to recreation activities, transportation, and visual aesthetics would be insignificant. No parks, managed areas, or ecologically significant sites would be affected.

One archaeological site (1LI568) and three historic structures eligible for listing on the National Register of Historic Places occur within the project area. The three eligible

historic structures would not be adversely affected. The proposed project could adversely affect the eligible archaeological site; in order to minimize this adverse effect, TVA would take certain mitigation measures listed below and in a memorandum of agreement executed between TVA and the Alabama State Historic Preservation Officer. These measures would mitigate the impacts of the proposed action on cultural resources to a level of insignificance under the National Environmental Policy Act.

Mitigation

The proposed action contains standard measures, including the use of Best Management Practices and other practices listed in the appendices of the EA, including the establishment of streamside management zones, to minimize environmental impacts. In order to minimize impacts to archaeological site 1LI568, the following mitigation measures would be employed:

Pre-Construction:

- Detailed recordation of all features that comprise 1LI568 including the portion of the historic Athens-Decatur roadbed that would be affected as well as the abandoned portion of the Louisville and Nashville Railroad and another unidentified railroad bed. Recordation would be conducted using total station to map characteristics of the feature at close intervals, the result of which would be to produce a detailed map of all features within the site.
- Photographs to document the site's condition before clearing and construction.
- Additional historical research to document the sequence of railroad construction in the area as well as railroad history.

Clearing and Construction:

- Clearing of the vegetation on the site within the right-of-way would be conducted with a low pressure tired feller-buncher during dry soil conditions.
- No heavy equipment, including the feller-buncher, would be allowed to traverse the feature or be positioned on it.
- Construction of transmission line structures 98-100 would be regulated to produce minimal impact to the feature and its contours.
- Photographs would be taken after right-of-way clearing that would document both the feature without its vegetative cover and any effects that may have occurred as a result of clearing. Additional photographs would be taken post construction to document the effects of structure placement.

Maintenance:

- The boundaries of the feature within the right-of-way would be depicted on the final Plan and Profile sheets which are used as reference during operation of the line.
- Conditions would be placed in the right-of-way easement as well as the final Plan and Profile sheets that would govern future maintenance of the line. These conditions would include no traversing of the site with heavy equipment and hand clearing of vegetation within its boundaries.
- Any action involving maintenance or replacement of the TL structures would be reviewed by TVA's Cultural Resources staff.

Conclusion and Findings

The Final EA for this proposal concludes that construction and operation of the transmission line and minor modifications at the two substations would not result in significant adverse impact upon the environment. This conclusion takes into account the implementation of the standard commitments, such as the use of Best Management Practices. It is also based on the implementation of the mitigation measures mentioned above.

Environmental Policy and Planning's NEPA Administration staff reviewed the Final EA and agreed with this conclusion, and determined that the preparation of an environmental impact statement is not required.

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10 Oct. 2003

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Date